

EXHIBIT 97

App Discovery and Ranking

Our goal is to help users easily discover apps and games they will enjoy from the millions on Google Play.

Users can learn about and install apps in many different ways on Google Play, on many different types of devices, including phones, tablets and TVs. For example, users can browse the homepage or sub navigation pages, search for an app, find details on app detail pages, or read through editorial selections.

We want users to see content that is relevant to them and have a positive experience with the apps they download. We generally favor apps that are high quality and relevant to a broad audience. The best thing a developer can do to increase discoverability is to build an app that people enjoy and recommend to others.

We constantly test and optimize the discovery experience on Google Play, from adding new discovery pages, to experimenting with different visual formats and layouts, and enhancing our ranking algorithms.

Understanding apps

Google Play needs to understand the content and functionality of an app in order to help users discover the right app at the right time.

When a developer submits an app to Google Play, the developer provides information about the app and its characteristics (for example app title, description, category and graphic assets) and information about the app's content and functionality. In addition, Google identifies additional characteristics from the app (for example, that the app is a "multiplayer" game) and analyzes user feedback (for example, through ratings, reviews and engagement). This information informs Google's approach to ranking and helps Google organize apps and present them to users whether they are browsing for something new or searching for a specific title.

Organizing and ranking apps

Users have many options for how to discover apps on Google Play. Our goal in organizing apps in Play is to determine which apps to display, how many to display, and how to display those apps in a user-friendly way. Many factors are involved when organizing apps, including:

User relevance: The most relevant apps to a user depends on where they are browsing or the query they use in a search.

Quality of the app experience: Apps that have strong technical performance and a good user experience are generally favored over lower quality apps.

Editorial value: Google Play provides curated recommendations to help users find content that is noteworthy and interesting.

Ads: Some developers choose to advertise on Google Play similar to other Google properties. These ads are well marked and shown alongside other content.

User experience: Google Play endeavors to ensure users have a positive experience in navigating the wide range of available apps.

These main factors impacting ranking are weighted differently based on where on Google Play a user is looking, the device they are on, and their personal preferences. For example, apps shown on Top Charts are heavily influenced by popularity, whereas apps shown in search results are heavily influenced by relevance to the user's query. Additionally, some apps are optimized for different devices and could be ranked higher when searched on a TV than on mobile for example, or may only be available on certain devices (for example, a car).

Detailed information on the main factors influencing ranking:

A. User relevance

We want to show people content that is relevant to them. The starting point is to determine which Google Play surface the user is on, and ensure apps are relevant and available. For example, some apps are only available in certain countries or compatible with certain devices (including specific form factors), such as Android TV.

To return relevant content to users, we also need to establish what they are looking for. We may determine user intent by implicit or explicit signals. For example, if a user visits a specific destination, such as the “Kids” tab (learn more about [our Teacher Approved program](#)), they are expressing an interest in seeing only apps for kids, and by visiting the “Editors’ Choice” tab, they are expressing an interest in seeing only apps recommended by Google Play’s editors.

When the user is using the search functionality, we need to establish the intent behind their query. We do this by deciphering the words typed and trying to determine if the user is looking for a specific app (by typing what we detect as the name of the app) or a category of apps (for example, racing games). This may include identifying other words, such as synonyms, to consider the appropriate set of results. Once we establish intent, metadata (for example, title, description, category) and other signals are used to determine which apps best address the user’s query. When an intent is narrow (such as an exact title search), we try to return that title. However, as an intent becomes broader (for example, a search for “photo editing”), many apps may be relevant. Google Play may factor in other signals which we believe will help users find apps that they will have better experiences with, such as the other factors described below (for example, app quality) or how users respond to results for a given query. We may also include Play Movies and Books content if we believe users are looking for such content while using the search feature.

We need to cater to billions of users, from over 190 countries, and across age groups. For that reason, across Google Play, we also consider whether an app can be relevant to and appropriate for a broad audience. If the app is more narrow in its relevance or audience, we may only give prominence to the app if we can determine with high confidence (e.g. through the search query or browsing state) that the user is specifically looking for these kinds of apps that are more narrow in relevance or audience. We may also show personalized recommendations to users. For example, we may use information we have collected (such as the apps a user previously installed) to generate recommendations for apps in a “For You” cluster. The [Google Privacy Policy](#) provides more information on how Google personalizes its services and users’ privacy controls.

B. Quality of the app experience

Android users expect high-quality apps, i.e. apps that deliver an overall good user experience and provide value to users beyond basic device capabilities. We also value high-quality apps as we believe that when users have positive experiences with apps they install, they are more likely to trust in the quality of apps on Google Play, which benefits the entire ecosystem.

We combine both manual signals and algorithmic methods to ensure that the apps we recommend to users are high quality. “App quality” is not only a function of the experience within the app itself but also key elements of the pre-install experience, such as the app’s icon, title, screenshots, videos, description and links. These should aid the user decision-making experience and provide a good representation of the app and its characteristics. The customer support experience the developer provides can also be relevant. Other factors that may help indicate that an app is high-quality include whether the app:

- provides standard visual design and user interaction patterns for a consistent and intuitive user experience;
- If ad-supported, has a good ads experience inside the app;
- provides the expected functional behavior, content, and features; and
- provides the compatibility, performance, stability, and responsiveness expected by users.

Determining whether an app is high- or low-quality is important in helping to ensure that apps that provide low value to users or that don’t perform as users’ expect do not appear on surfaces where users seek to discover new app recommendations or rise to the top in search results. Since app quality will help determine how apps are organized on Google Play, we work hard to provide developers with guidance and tools to help them improve their app quality. We provide testing [guidelines](#) to developers to help them assess the core aspects of quality in their app; additional guidelines to make sure developers provide an excellent user experience and gain additional exposure available for Wear OS, TV, and Auto apps; and a [checklist](#) for developers using Google Play Games Services. We enable developers to iterate on ideas and improve the quality of their apps before launch by gathering feedback from testers in [internal, closed and open tracks](#). We also provide developers with [tips on improving app quality](#) and [resources in the Academy for App Success](#). Within the Google Play Console, developers can utilize tools such as [app statistics](#), [Android vitals](#) for technical performance analysis, [ratings and reviews analysis](#). The Play Console allows developers to compare their app’s performance to peer sets to help better understand where they can improve their own app’s performance. Developers also have access to user feedback in the form of public ratings and reviews, which are helpful in identifying quality or support concerns from users.

C. Editorial value

Users also rely on Google Play's perspective on what content is noteworthy and interesting, and we provide curated recommendations from the Google Play team to help them find it.

This includes manual selection of content for featuring & promotion and creation of custom manual placements by a team of Google Play editors and merchandisers. These placements can be ongoing (for example, articles, labels or descriptions) or limited duration (for example, seasonal moments), and may be presented using a variety of visual layouts.

When selecting content, the editorial and merchandising teams focus on the quality of the app experience (see above), as well as criteria such as the novelty, design, usefulness of the content, and breadth of appeal. We use the "Editors' Choice" label to highlight what we deem the very best apps for a given topic. We may also provide additional written descriptions on what we think makes the content interesting (e.g. "why we love this" bullets).

We may also do merchandising campaigns. The team may consider timeliness and local relevance when creating a campaign, and such campaigns can include promotions (e.g. Black Friday sale), local events (e.g. Halloween), or content moments (e.g. a new release or a major update). For some campaigns, the team may also consider monetization potential when selecting content.

D. Ads

Developers can pay to be displayed in clearly marked sections of Google Play through advertising. Ads are always marked with a label like 'ads' or 'sponsored'. Learn more about how to [create a Google Ads campaign for your app](#).

E. User experience on Google Play

We want to ensure users have a positive experience when navigating Google Play and can discover the apps they want, as well as new and undiscovered titles, and useful information about those apps. We therefore consider the user experience when designing all aspects of Google Play, for example, how we group apps, where and how many ads to show in results, and the formats we use to present apps to users. The more helpful and engaging the user experience is on Google Play, the more often users will return to discover and install new apps.